

20. (Amended) A liquid permeable composite material,
comprising:
a liner including a plurality of apertures; and
a substructure applied to the liner, wherein the substructure and the liner
define a plurality of voids for accommodating passage of fluids through the composite
material.

REMARKS

Applicants respectfully request favorable reconsideration of the subject application, particularly in view of the above Amendment and the following remarks.

The present invention is directed to a composite material suitable for use as a liner system in personal care absorbent products for accommodating passage of fluids through the composite material. In one embodiment of this invention, the composite material is particularly suitable for accommodating passage of high viscosity fluids containing particles, wherein a first layer of the composite material includes a plurality of slits or apertures that extend through the first layer to permit the passage of the high viscosity fluids including the particles which may be contained therein through the first layer.

A substructure is applied to the first layer. The substructure may be, for example: pleated, corrugated, thermoformed or embossed. Desirably, the substructure is a three-dimensional nonwoven material or web. Meltblown and

spunbond fibrous nonwoven webs work particularly well as materials from which to form the substructure. The first layer and the substructure define a plurality of voids for accommodating passage of fluids through the composite material. In one embodiment of this invention, the plurality of voids form a plurality of compartments suitable for entrapping particles contained within high viscosity fluids which pass through the apertures in the first layer.

In one embodiment of this invention, the composite material is bonded or laminated to an absorbent core, which is located between the composite material and an outer cover. The high viscosity fluid moves through the first layer into the substructure, wherein particles contained in the fluid are separated from the fluid and are entrapped within the voids formed in the composite material. The fluid is absorbed through the substructure and into the absorbent core to reduce leakage and rewet.

Amendment to the Claims

Claims 1-29 remain in this application.

Applicants have amended independent Claims 1 and 20 to require a liquid permeable composite material. This amendment is fully supported in the Specification, for example at page 11, line 20 through page 14, line 21, and at page 25, lines 1-8.

Applicants have amended independent Claim 16 to require that the plurality of compartments form fluid communication between the first layer and the substructure. This amendment is fully supported in the Specification, for example at page 15, lines 8-15 and Figs. 1 and 2.

Applicants have amended dependent Claim 17 to overcome the Examiner's rejection of Claim 17 under 35 U.S.C. § 112, second paragraph.

Attached hereto is a marked-up version of the changes made to the pending claims by this Amendment. The above Amendment adds no new matter to this Patent Application.

Claim Rejections - 35 U.S.C. § 112

Claim 17 has been rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Applicants have amended Claim 17, accordingly. Thus, Applicants respectfully request withdrawal of this rejection.

Claim Rejections - 35 U.S.C. § 102

The rejection of Claims 1-4, 6-8, 10 and 13-15 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,420,625 ("Jones et al.") is respectfully traversed, particularly in view of the above Amendment and the following remarks.

At paragraph 3 of the Office Action, the Examiner states that the changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999

do not apply to the examination of this application as the application being examined was not filed on or after November 29, 2000 or voluntarily published under 35 U.S.C. 122(b). Therefore, the application was examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)). However, Applicants note that the subject application was filed on 31 May 2001.

The present invention as claimed in amended independent Claim 1 requires a **liquid permeable** composite material comprising a first layer including a plurality of apertures and a substructure applied to the first layer, wherein the substructure and the first layer define *a plurality of voids for accommodating passage of fluids through the composite material*. As set forth in Applicants' specification, the composite material of the present invention is suitable for use as a liner system in personal care absorbent products. For example, the first layer and the substructure define a plurality of voids for accommodating passage of fluids through the composite material. As high viscosity fluids move through the first layer into the substructure, the particles contained in the fluid are separated from the fluid and are entrapped within the voids formed in the composite material. The fluid is absorbed through the substructure and into an absorbent core bonded or laminated to the composite material.

Jones et al. discloses a breathable, **liquid-impermeable** film/nonwoven laminate material for forming a backsheet for absorbent articles, such as diapers,

sanitary napkins, incontinent garments, and the like. The backsheet is arranged on the absorbent article preferably so that the nonwoven layer faces outward and is in contact with the clothing of the wearer and the apertured film and breathable film layers face inward towards the absorbent core of the absorbent article. Jones et al. at Col. 5, lines 19-24. The breathability of the breathable film layer, in combination with the apertured film layer, ensures that any backsheet formed from the laminate of Jones et al. will allow moisture in the form of vapors to escape into and out of the absorbent portion of the article. However, the breathable film layer must be constructed so that liquids maintained within the absorbent core of the article will not leak through the backsheet. Jones et al. at Col. 9, lines 33-40.

Jones et al. does not teach or suggest a liquid permeable composite material comprising a first layer and a substructure applied to the first layer to define a plurality of voids for accommodating passage of fluids through the composite material, as required by Applicants' claimed invention. Rather, Jones et al. teaches a laminate having an apertured film layer, which when laminated to the breathable film layer and/or the nonwoven layer, will not define voids, as in the present invention, for accommodating passage of fluids through the composite material since Jones et al. teaches using a liquid impermeable film layer, in combination with an apertured film layer, to ensure that a backsheet formed of the laminate will be liquid impermeable.

Applicants urge that the above Amendment and remarks overcome the rejection of Claims 1-4, 6-8, 10 and 13-15 under 35 U.S.C. § 102(e) as being anticipated by Jones et al. Thus, Applicants respectfully request withdrawal of this rejection.

The rejection of Claim 16 under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent 6,267,975 (“Smith, III et al.”) is respectfully traversed, particularly in view of the above Amendment and the following remarks.

The present invention as claimed in amended independent Claim 16 requires a composite material comprising a first layer including a plurality of apertures and a substructure applied to the first layer, wherein the substructure and the first layer define *a plurality of compartments forming fluid communication between the first layer and the substructure for accommodating passage of fluids through the composite material*. In one embodiment of this invention, the compartments are suitable for entrapping particles contained within high viscosity fluids that pass through the apertures in the first layer.

Smith, III et al. discloses a dry, disposable personal cleansing article comprising a water insoluble substrate having at least two layers suitable for contact with a skin surface and a cleansing component or a therapeutic component disposed adjacent the first and second layer including a lathering surfactant. Smith. III et al. at Col. 2, lines 37-62. Smith, III et al. further discloses a personal cleansing article

in one embodiment comprising one or more chambers defining **enclosed areas**. These chambers separate various article components from one another. Smith, III et al. at Col. 27, lines 49-55.

Smith, III et al. does not teach or suggest a composite material comprising a first layer and a substructure applied to the first layer to define a *plurality of compartments forming fluid communication between the first layer and the substructure for accommodating passage of fluids through the composite material*, as required by Applicants' claimed invention. Rather, Smith, III et al. teaches an enclosed chamber containing article components. Thus, the enclosed chamber of Smith, III et al. does not define compartments forming fluid communication between the first layer and the second layer, as in the present invention, for accommodating passage of fluids through the composite material.

Applicants urge that the above Amendment and remarks overcome the rejection of Claim 16 under U.S.C. § 102(e) as being anticipated by Smith, III et al. Thus, Applicants respectfully request withdrawal of this rejection.

Claim Rejections - 35 U.S.C. § 103

The rejection of Claims 1-5, 10 and 12-14 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,643,240 ("Jackson et al.") in view of Jones et al. is respectfully traversed, particularly in view of the above Amendment and the following remarks.

Jackson et al. teaches a composite material comprising an apertured film and a lofty fibrous nonwoven web separation layer. However, as indicated by the Examiner at paragraph 7 of the Office Action, Jackson et al. does not teach or suggest voids within the film and nonwoven layer, as required by Applicants' claimed invention, for accommodating passage of fluids through the composite material. As discussed above, Jones et al. does not overcome the deficiencies of Jackson et al. Further, one having ordinary skill in the art would not be motivated to combine the liquid impermeable material of Jones et al. with the composite material of Jackson et al. to arrive at Applicants' claimed invention.

Accordingly, Applicants respectfully urge that Jackson et al., alone or in combination with Jones et al., does not render Applicants' claimed invention obvious in the manner required by 35 U.S.C. § 103(a). Thus, Applicants respectfully request withdrawal of this rejection.

The rejection of Claims 1, 9, 11 and 14 under 35 U.S.C. § 103(a) as being unpatentable over Jones et al. in view of U.S. Patent 6,420,625 ("Huntoon et al.") is respectfully traversed, particularly in view of the above Amendment and the following remarks.

As discussed above, Jones et al. fails to teach or suggest important claimed features of Applicants' invention as claimed in amended independent Claim 1. Huntoon et al. fails to overcome the deficiencies of Jones et al. Huntoon et al.

merely teaches a three-dimensional thermoformed bicomponent fiber nonwoven material comprising a lofty bicomponent material layer forming a plurality of peaks separated from one another by channels. Huntoon et al. does not teach certain limitations of the present invention as claimed in amended independent Claim 1. Namely, Huntoon et al. does not teach a first layer including a plurality of apertures, and a substructure applied to the first layer, wherein the substructure and the first layer define a plurality of voids for accommodating passage of fluids through the composite material. Further, one having ordinary skill in the art would not be motivated to combine the nonwoven material as taught by Huntoon et al. with the liquid impermeable laminate material as taught by Jones et al. to arrive at Applicants' claimed invention.

Accordingly, Applicants respectfully urge that Jones et al. alone or combination with Huntoon et al., does not render Applicants' claimed invention obvious in the manner required by 35 U.S.C. § 103(a). Thus, Applicants respectfully request withdrawal of this rejection.

The rejection of Claims 16-19 under 35 U.S.C. § 103(a) as being unpatentable over Smith, III et al. is respectfully traversed, particularly in view of the above Amendment and the following remarks.

As discussed above, Smith, III et al. fails to teach or suggest certain limitations of the present invention as claimed in amended independent Claim 16.

Claims 17-19 depend from and further limit amended independent Claim 16, which Applicants believe is patentable for at least the reasons presented above. As indicated by the Examiner at paragraph 9 of the Office Action, Smith, III et al. does not disclose the cross-sectional type of the compartments or the height and width of the compartments, as claimed in dependent Claims 17-19. However, the Examiner alleges that these are optimizable features. As set forth above, Smith, III et al. does not teach claimed features of Applicants' invention as claimed in independent Claim 16, regardless of the features claimed in dependent Claims 17-19. Accordingly, Applicants respectfully urge that Smith, III et al. does not render Applicants' claimed invention obvious in the manner required by 35 U.S.C. § 103(a). Thus, Applicants respectfully request withdrawal of this rejection.

The rejection of Claims 20-29 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 5,853,403 ("Tanzer et al.") in view of Jones et al. is respectfully traversed, particularly in view of the above Amendment and the following remarks.

Tanzer et al. discloses a liquid control member designed to stay in contact with the urethral region of the wearer to control the input of liquid to the absorbent assembly. The liquid control member has a first stationary zone bonded to a front waist region of the garment and a second stationary zone bonded to a back

waist region of the garment, with a elasticized zone positioned between the stationary zones and unadhered to the garment.

As indicated by the Examiner at paragraph 10 of the Office Action, Tanzer et al. does not teach or suggest voids defined by the first layer and the substructure of the composite material for accommodating passage of fluids through the composite material. As discussed above, Jones et al. does not overcome the deficiencies of Tanzer et al. Jones et al. teaches a laminate having an apertured film layer, which when laminated to the breathable film layer and/or the nonwoven layer, will not define voids, as in the present invention, for accommodating passage of fluids through the composite material since Jones et al. teaches using a liquid impermeable film layer, in combination with an apertured film layer, to ensure that a backsheet formed of the laminate will be liquid impermeable. Thus, one having ordinary skill in the art would not be motivated to combine the liquid impermeable material of Jones et al. with the teachings of Tanzer et al. to arrive at Applicants' claimed invention.

Accordingly, Applicants respectfully urge that Tanzer et al., alone or in combination with Jones et al., does not render Applicants' claimed invention obvious in the manner required by 35 U.S.C. § 103(a). Thus, Applicants respectfully request withdrawal of this rejection.

CONCLUSION

Applicants intend to be fully responsive to the outstanding Office Action. If the Primary Examiner detects any issue which the Primary Examiner believes Applicants have not addressed in this response, Applicants' undersigned attorney requests a telephone call from the Examiner. The undersigned can be reached at (847) 490-1400.

Applicants sincerely believe that this Patent Application is now in condition for allowance and, thus, respectfully requests early allowance.

Respectfully submitted,



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VERSION WITH MARKINGS TO SHOW CHANGES MADE

In the Claims:

1. (Amended) A liquid permeable composite material, comprising:

a first layer including a plurality of apertures; and

a substructure applied to the first layer, wherein the substructure and the first layer define a plurality of voids for accommodating passage of fluids through the composite material.

16. (Amended) A composite material, comprising:

a first layer including a plurality of apertures; and

a substructure bonded to the first layer, wherein the substructure and the first layer define a plurality of compartments forming fluid communication between the first layer and the substructure for accommodating passage of fluids through the composite material.

17. (Amended) The composite material of Claim 16, wherein the compartments have a [generally] triangular cross section.

20. (Amended) A liquid permeable composite material,
comprising:

a liner including a plurality of apertures; and
a substructure applied to the liner, wherein the substructure and the liner
define a plurality of voids for accommodating passage of fluids through the composite
material.